

I claim:

- 402C 1. A clamp for a cable support system to suspend an object from an overhead beam comprising:

A a generally "C" shaped clamp body;
B a threaded fastener threadingly received within one leg of said "C" shaped body to clamp said "C" shaped body onto said overhead beam;
C a vertical bore through said clamp body for receiving a cable to be suspended from said overhead beam; and
D means to restrict the downward vertical movement of said cable relative to said clamp body.

2. The clamp of claim 1 wherein said means to restrict the downward movement of said cable relative to said clamp body comprises an annular shoulder in said bore that prevents downward movement of an oversized end portion of said cable through said bore.

- pub 3. The clamp of claim 1 wherein said means to restrict the downward movement of said cable relative to said clamp body comprises:

a conical end portion at the lower part of said bore;
a wedge retainer vertically movable within said bore;
wedges retained by said wedge retainer to contact said cable within said bore and to be forced against said cable by said conical end portion of said bore when said retainer is at the lower part of said bore; and
a spring to urge said wedge retainer downwardly relative to said bore.

4. The clamp of claim 3 wherein the vertical position of said cable is adjustable by forcing said cable upwardly from the bottom of said bore to release said wedges and permit upward movement of said cable relative to said clamp.
5. The clamp of claim 4 wherein said wedge retainer has a threaded portion protruding below said bore with a lock nut threaded onto said wedge retainer lower portion so that after said cable is positioned within said clamp "C" shaped body at the desired height, said lock nut is tightened against said clamp "C" shaped body to lock said wedge retainer and prevent movement of said wedge retainer relative to said bore.
6. The clamp of claim 1 wherein said means to restrict the downward movement of said cable relative to said clamp body comprises:
- a passage extending downwardly within said clamp body at an acute angle to said vertical bore and communicating with said bore;
 - a wedge slidable within said passage and extending into said bore;
 - a spring within said passage urging said wedge toward said bore so that a cable may be inserted upwardly into said bore against the force of said spring; and
 - release levers fixed to said wedge and extending outwardly through slots in said clamp body to selectively move said wedge against the force of said spring to release said cable.

7. A cable support system for hanging an object at a desired distance below an overhead beam comprising:

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a clamp having a generally "C" shaped clamp body with a threaded fastener ^A threadingly received within one leg of said "C" shaped body to clamp said ^B "C" shaped body onto said overhead beam and a vertical bore through said ^B clamp body to receive a cable to be suspended from said overhead beam, ^C said vertical bore having an annular shoulder in said bore to prevent ^{DSP} downward movement of an oversized end of said cable through said bore;

an object to be suspended by said cable at a predetermined height below said beam:

a cable grip having first and second bores extending longitudinally through a housing wherein said first bore permits free movement of a cable relative to said cable grip housing and said second bore has wedge means associated therewith that permit movement of said cable relative to said second bore in one direction but prevent movement of said cable in the other direction;

said cable suspended from said clamp being passed through said first bore of said cable grip and thereafter being looped around said object and then being positioned within said second bore of said cable grip; and

the height of said object below said beam being adjusted by adjusting the amount of cable moved through said cable grip second bore.

8. A cable support system for hanging an object at a desired distance below an overhead beam comprising:

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a clamp having a generally "C" shaped clamp body with a threaded fastener ^A threadingly received within one leg of said "C" shaped body to clamp said ^B "C" shaped body onto said overhead beam and a vertical bore through said ^C clamp body to receive a cable to be suspended from said overhead beam, said vertical bore having a conical lower end portion with a wedge retainer and wedges vertically movable within said bore whereby said wedges contact said lower conical end portion and said cable to wedge said cable into position within said bore, the vertical position of said cable relative to said bore being vertically adjustable by forcing said cable upwardly to release said wedges;

an object to be suspended by said cable at a predetermined height below said beam; and

means for connecting said cable to said object.

9. The cable support system of claim 8 wherein said means for connecting said cable to said object includes:

a permanent loop formed on the end of said cable; and

passing said cable around said object and thereafter threading said cable through said permanent loop formed on the end of said cable and thereafter threading said cable into said vertical bore in said clamp.

10. The cable support system of claim 9 wherein the height of said object below said beam is controlled by the amount of said cable threaded upwardly through said vertical bore in said clamp.
11. The cable support system of claim 8 wherein said means for connecting said cable to said object includes:
- a cable grip having first and second bores extending longitudinally through a housing wherein said first bore permits free movement of a cable relative to said cable grip housing and said second bore has wedge means associated therewith that permit movement of said cable relative to said second bore in one direction but prevent movement of said cable in the other direction; and
- said cable suspended from said clamp being passed through said first bore of said cable grip and thereafter being passed around said object and then being positioned within said second bore of said cable grip.
12. The cable support system of claim 11 wherein the height of said object below said beam may be controlled by the amount of said cable threaded upwardly through said vertical bore in said clamp.
13. The cable support system of claim 11 wherein the height of said object below said beam may be controlled by the amount of said cable threaded through said cable grip second bore.

14. The cable support system of claim 8 wherein said clamp vertical bore includes a spring that urges said wedge retainer downwardly relative to said bore.
15. The cable support system of claim 8 wherein said clamp wedge retainer has a threaded portion protruding below said bore with a lock nut threaded onto said wedge retainer lower portion.
16. The cable support system of claim 10 wherein said clamp wedge retainer has a threaded portion protruding below said bore with a lock nut threaded onto said wedge retainer lower portion so that after said cable is positioned within said clamp "C" shaped body at the desired height, said lock nut is tightened against said clamp "C" shaped body to lock said wedge retainer and prevent movement of said wedge retainer relative to said bore.
17. *sub* A cable support system for hanging an object at a desired distance below an overhead beam comprising:

a clamp having a generally "C" shaped clamp body with a threaded fastener threadingly received within one leg of said "C" shaped body to clamp said "C" shaped body onto said overhead beam and a vertical bore through said clamp body to receive a cable to be suspended from said overhead beam, said vertical bore having a downwardly extending passage communicating with it at an acute

angle with a wedge slidable within said passage and being urged toward said bore by a spring within said passage, said wedge having release levers extending outwardly through slots in said "C" shaped body to release said wedge from said cable for movement of said cable; an object to be suspended by said cable at a predetermined height below said beam; and means for connecting said cable to said object.

18. The cable support system of claim 17 wherein said means for connecting said cable to said object includes:
- a permanent loop formed on the end of said cable; and
 - passing said cable around said object and thereafter threading said cable through said permanent loop formed on the end of said cable and thereafter threading said cable into said vertical bore in said clamp.
19. The cable support system of claim 18 wherein the height of said object below said beam is controlled by the amount of said cable threaded upwardly through said vertical bore in said clamp.
20. The cable support system of claim 17 wherein said means for connecting said cable to said object includes:
- a cable grip having first and second bores extending longitudinally through a

housing wherein said first bore permits free movement of a cable relative to said cable grip housing and said second bore has wedge means associated therewith that permit movement of said cable relative to said second bore in one direction but prevent movement of said cable in the other direction; and

said cable suspended from said clamp being passed through said first bore of said cable grip and thereafter being passed around said object and then being positioned within said second bore of said cable grip.

21. The cable support system of claim 20 wherein the height of said object below said beam may be controlled by the amount of said cable threaded upwardly through said vertical bore in said clamp.
22. The cable support system of claim 20 wherein the height of said object below said beam may be controlled by the amount of said cable threaded through said cable grip second bore.